

What is claimed are:

1. An electric current detector comprising a Hall effect sensor, a plurality of lead terminals electrically connected to said Hall effect sensor, a plastic package for encapsulating said Hall effect sensor and each end of said lead terminals, and a conductor loosely disposed with a gap in an opening formed in said plastic package and in spaced relation to said Hall effect sensor to pass a detected electric current through said conductor.
2. The electric current detector of claim 1, further comprising a core formed of a magnetic material embedded in said plastic package, said opening being formed inside said core.
3. The electric current detector of claim 1 or 2, further comprising a reinforcement tube embedded in said plastic package to define said opening inside said reinforcement tube.
4. The electric current detector of claim 1 or 2, wherein said conductor is formed with a pair of legs that extend outside said opening, each of said legs having a bent, curved or enlarged portion to prevent disengagement of said conductor from said opening.
5. The electric current detector of claim 3, wherein said conductor is formed with a pair of legs that extend outside said opening, each of said legs having a bent, curved or enlarged portion to prevent disengagement of said conductor from said opening.
6. The electric current detector of claim 1, wherein said conductor is larger than said opening in length but smaller than said opening in thickness and width to cause said conductor to vertically, longitudinally and widthwise move in said opening.
7. The electric current detector of claim 1, wherein said conductor comprises a pair of bases at the opposite ends to electrically connect said bases to printed circuits on substrate for detection of electric current through said conductor.
8. The electric current detector of claim 1, further comprising a core formed of a magnetic material embedded in said plastic package,  
a reinforcement tube of rectangular section to define said opening inside said reinforcement tube, said reinforcement tube being disposed in a channel formed by

said core,

wherein said Hall effect sensor is positioned in said channel in front of said reinforcement tube, and said conductor is irremovably located in said opening for longitudinal movement in a limited range.

9. The electric current detector of claim 1, wherein said conductor may be arranged in said opening without contact to inner surfaces of said reinforcement tube.

10. The electric current detector of claim 1, further comprising a support pad for mounting said Hall effect sensor on said support pad,

wherein said support pad, Hall effect sensor and lead terminals form a leadframe assembly for integral attachment in a cavity of a mold to form said package.

11. The electric current detector of claim 2, wherein said conductor forms a magnetic field of magnetic flux and

said core forms a magnetic circuit through which said magnetic flux passes across said Hall effect sensor.

12. The electric current detector of claim 11, wherein said core comprises a pair of arm plates and a connector for connecting said arm plates to define a channel,

a reinforcement tube is positioned in said channel to receive said conductor in said reinforcement tube.

13. The electric current detector of claim 12, wherein each of said arm plates has an inward lug at the free end extending toward said Hall effect sensor.